



The SMART Competition is a high school team-based STEM education program that provides hands-on learning experience and practical investigation of intelligent building design, renewable technology and the smart grid.

Not IQ.

The Competition promotes sustainable design, renewable technology, energy efficiency and the smart grid.



The competition is designed to encourage an academic interest in science, technology, engineering and math (STEM) and to increase student motivation to learn and stay in school while providing an opportunity for fun and creative student-team academic activities. Solutions will address Energy, Power Generation, Power Distribution,

Transportation, Electric Vehicles, Architecture and Sustainable Technology. The ultimate goal of the program is to create student interest in pursuing university studies and STEM related careers.

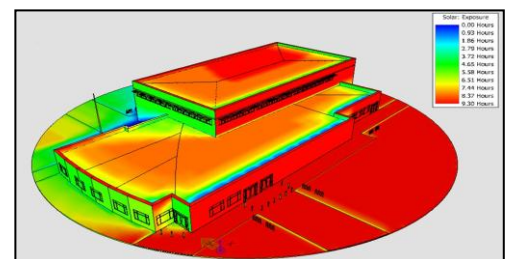
Key design features

- Make the campus more energy self-sufficient through the use of sustainable materials and renewable technology.
- Add renewable power generation capability to the campus
- Design for the future using cutting edge computer simulation

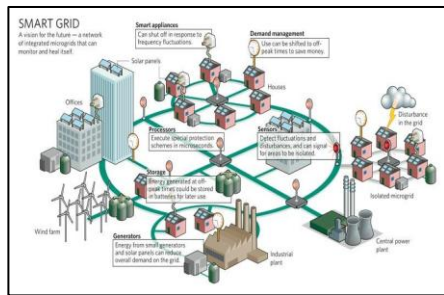


Team Design Requirements

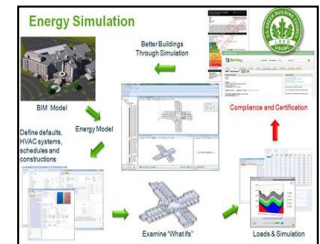
1. Using Bentley software tools, conduct energy and loading analysis and identify improvement opportunities
2. Redesign the gymnasium to improve energy efficiency. Teams can implement changes to all roof, wall, door and window materials used, redesign lighting, landscaping and change the building orientation.
3. Add energy generating systems to the campus.
4. Insert surplus energy into the surrounding neighborhood's smart grid.



The competition is designed to provide a real-world application of technology by empowering students to address critical environmental and energy challenges. In addition to the academic elements of the



competition, the program facilitates the development of workforce and life skills including computer analysis and software design, verbal and written communication, research, teamwork and problem solving. Students achieve an increased awareness of the smart grid, green building design, the environment, community, livability and sustainability related issues.



Student Deliverables

- Computer generated animation of a fly-around of their campus and gymnasium
- Design, Innovation and Impact Report
- Team presentation
- Provide actionable recommendations to local leadership that will improve the energy use or decrease reliance on externally provided power by their school.



Who can compete

The competition is open to all public, private, parochial schools, home-based schools, clubs and sponsored educational entities. The program is regionally based with the top team from each area competing in a global competition.



As a professional...Get Involved!

You can make a difference.

- Introduce the SMART Competition program to high schools
- Provide expertise in the Bentley software.
- Promote employee involvement
- Engage your professional network

www.smartcompetition.org